

## Work Order ID 121220

\*121220\*

Page 1

June-18-14 1:54:49 PM

Item ID: D3443-5

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Tubing

Stop

\*NS2\*

Start Date: 6/18/14

Start Qty: 12.00

\*12\*

Cust Item ID:

Required Date: 6/18/14

Req'd Qty: 12.00

\*12\*

Customer:

Reference:

Approvals:

Process Plan: MLS

Date: 1406-18

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
100		0.00							
*100*	BAND SAW								
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	1-Cut blank 5.97 " long2-Deburr								
		0.00							
110		0.00							
*110*	CONVENTIONAL MILLING MACHINE								
Mill Conv	Memo	0.00							
Conventional Milling Machine	1- Mill to lenght and drill holes (one side only)as per dwg D3443 2-Deburr as per dwg D3443								
		0.00							
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
*120*	Memo	0.00							
QC									
Quality Control									

12 0 J.C.-L.

DAS

J.DAS L. 14/07/03

37

9-89

12 0

DAS

37

9-89

12 0 J.C.-L 14/07/03

DAS

37

9-89

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only 

Work Order: _____	<b>DISPOSITION</b>			<b>AGAINST DEPARTMENT/PROCESS</b>					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									
<b>FAULT CATEGORY</b>									
<b>Landing Gear</b>            	<b>General</b>		<b>Folio/Program</b>		<b>Outside Dimensions</b>		<b>Pressure/Forced</b>		
	e8-e	Bending	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>		
		Centre Not Concentric	BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>			
		Cracks	Broken/Damage/Defect <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>			
		Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>			
		Cuffs	Contamination <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>			
		Crushing	Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Other <input type="checkbox"/>			
		Heat Treat	Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>				
		Inspection Strip in Tube	Drawing <input type="checkbox"/>	Off-set <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>				
		Marks/Chatter	Drill Holes <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>					
		Turning Sequence	Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>					
		Wave/Twist in Tube	Fit/Function <input type="checkbox"/>						

**Work Order ID 121220**

June 18-14 1:54:49 PM

**\*121220\***

Page 2

Item ID: D3443-5

Accept

**\*N900040100\***

Setup

Start

**\*NS1\***

Revision ID:

Item Name: Tubing

Stop

**\*NS2\***

Start Date: 6/18/14 Start Qty: 12.00

**\*12\***

Cust Item ID:

Required Date: 6/18/14 Req'd Qty: 12.00

**\*12\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

**\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop

**\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC8- Inspect parts - second check

0.00

DAS

**\*130\***

QC

Quality Control

12

0

14-07-04

140

Identify as per dwg & Stock Location: W1062

0.00

12

14-07-07

**\*140\***

Packaging

Packaging

Memo

0.00

\*\*\*\*\*STOCK IN LARGE FAB\*\*\*\*\*

12

14-07-07

150

QC21- Final Inspection - Work Order Release

0.00

**\*150\***

QC

Quality Control

Memo

0.00

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

12

14-07-08

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

Work Order update only 

Work Order: _____			<b>DISPOSITION</b>		<b>AGAINST DEPARTMENT/PROCESS</b>														
			Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>				Engineering <input type="checkbox"/>									
			Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>				Quality <input type="checkbox"/>									
			Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>												
			Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>													
Root Cause	Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector								
Design																			
Doc/Data																			
Equip/Tooling																			
Handling/Prep																			
Material																			
Operator																			
Offset/Setup																			
Process																			
Supplier																			
Training																			
Transport																			
Unapproved																			
FAULT CATEGORY																			
Landing Gear				General															
<input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				<input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function				<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence				<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge				<input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled			
																<input type="checkbox"/> Other			

# Picklist Print

Page 1

June 18-14 1:54:53 PM

Work Order ID: 121220

\*121220\*

Parent Item: D3443-5

\*D3443-5\*

Parent Item Name: Tubing

Start Date: 6/18/14

Required Date: 6/18/14

Start Qty: 12.00

Required Qty: 12.00

Comments: A05.11.14New issueEC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.750W.120		Purchased		No		100	f	41.7500	0.495	7	**	6.000'	J.C.-L.

\*M304TR0 750W 120\*

304 ss round tube .750 x .120w

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT017	41.75	
→ 125656	41.75	6.000'

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_

Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	<b>DISPOSITION</b>			<b>AGAINST DEPARTMENT/PROCESS</b>					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

## FAULT CATEGORY

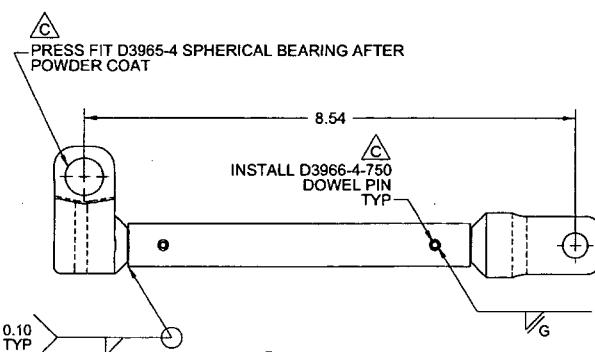
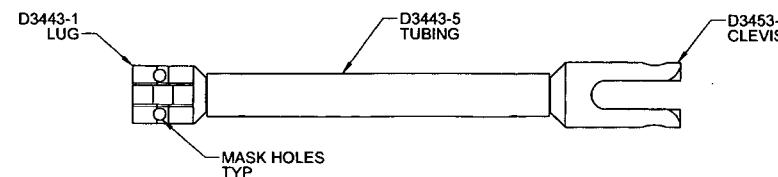
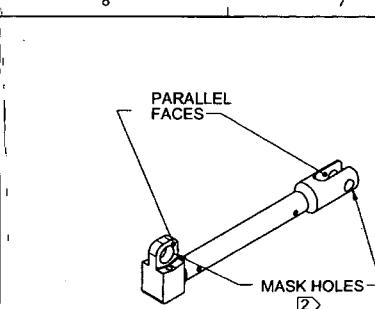
Landing Gear	Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced Set-up <input type="checkbox"/>
	Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>
	Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>
	Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>
	Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Other <input type="checkbox"/>
	Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>	
	Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>	
	Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>		
	Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>		
	Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>		
	Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>		

D3065-5DART AEROSPACE LTD	Work Order:	121220
Description: Tubing	Part Number:	D3443-5
Inspection Dwg: D3443      Rev: C		Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

Measured by:	J.C.-L	DAS 37 9-09	Audited by:	20 9-09	Preliminary Approval:	
Date:	14/01/03		Date:	14-07-04		Date:

Rev	Date	Change	Revised by	Approved
A	06.09.05	New Issue	KJ/JLM	
B	09.11.04	Dwg Rev updated	KJ	
C	12.10.10	Tolerance revised for Ø0.750	KJ	 



**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3  
NO POWDER COAT IN HOLES
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 1.33 lbs
- 8) WELD PER DART QSI 004

ITEM	QTY	P/N	DESCRIPTION
1	X	D3443-041	STRUT WELDMENT ASSEMBLY
2	1	D3443-1	LUG
3	1	D3443-5	TUBING
4	1	D3453-1	CLEVIS
5	1	D3965-4	BEARING, SPHERICAL
6	2	D3966-4-750	PIN, DOWEL

SHOP COPY  
RETURN TO  
ENGINEERING  
**UNCONTROLLED COPY**  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

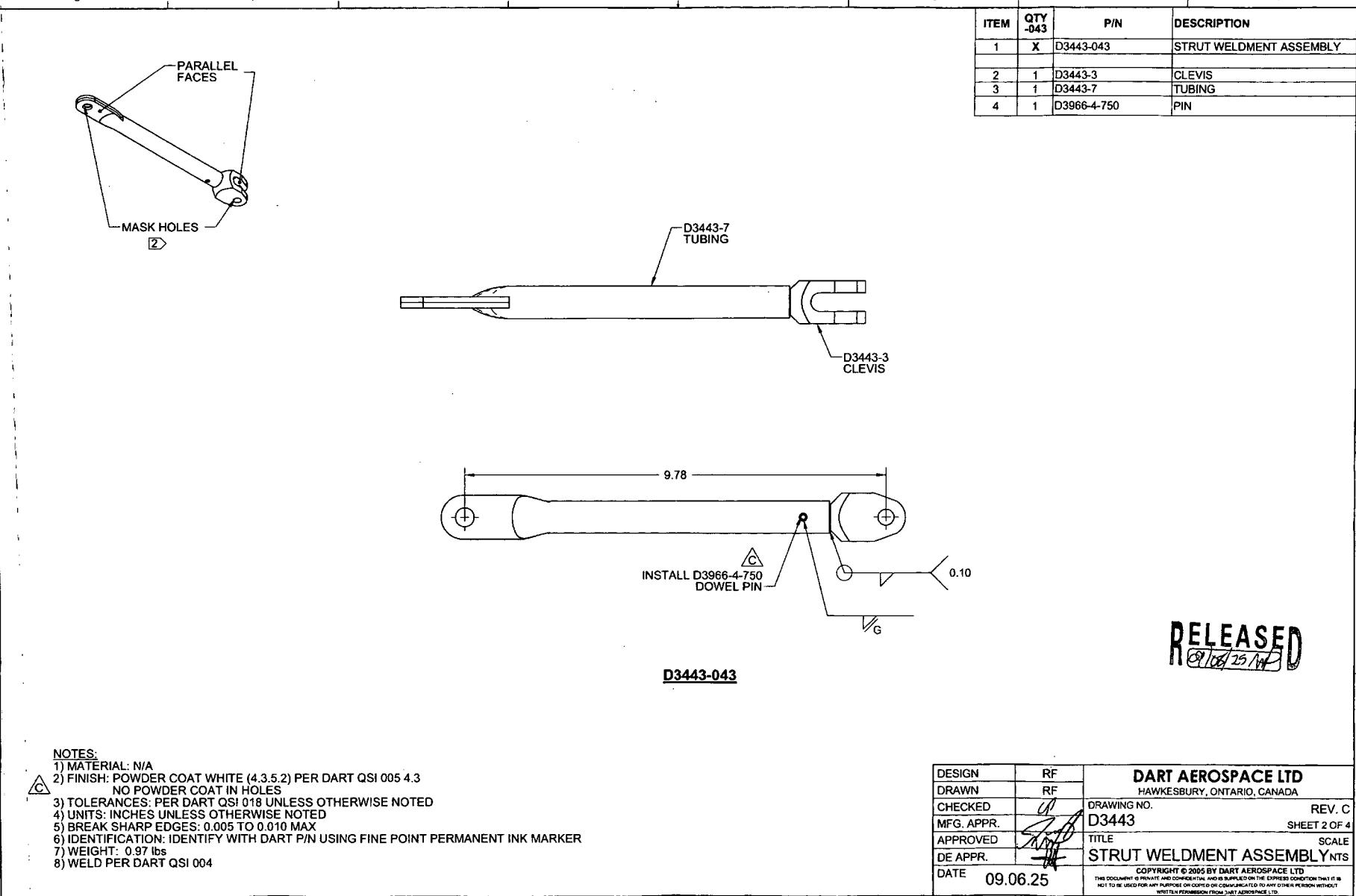
NO. 121220 ML5

14-06-18

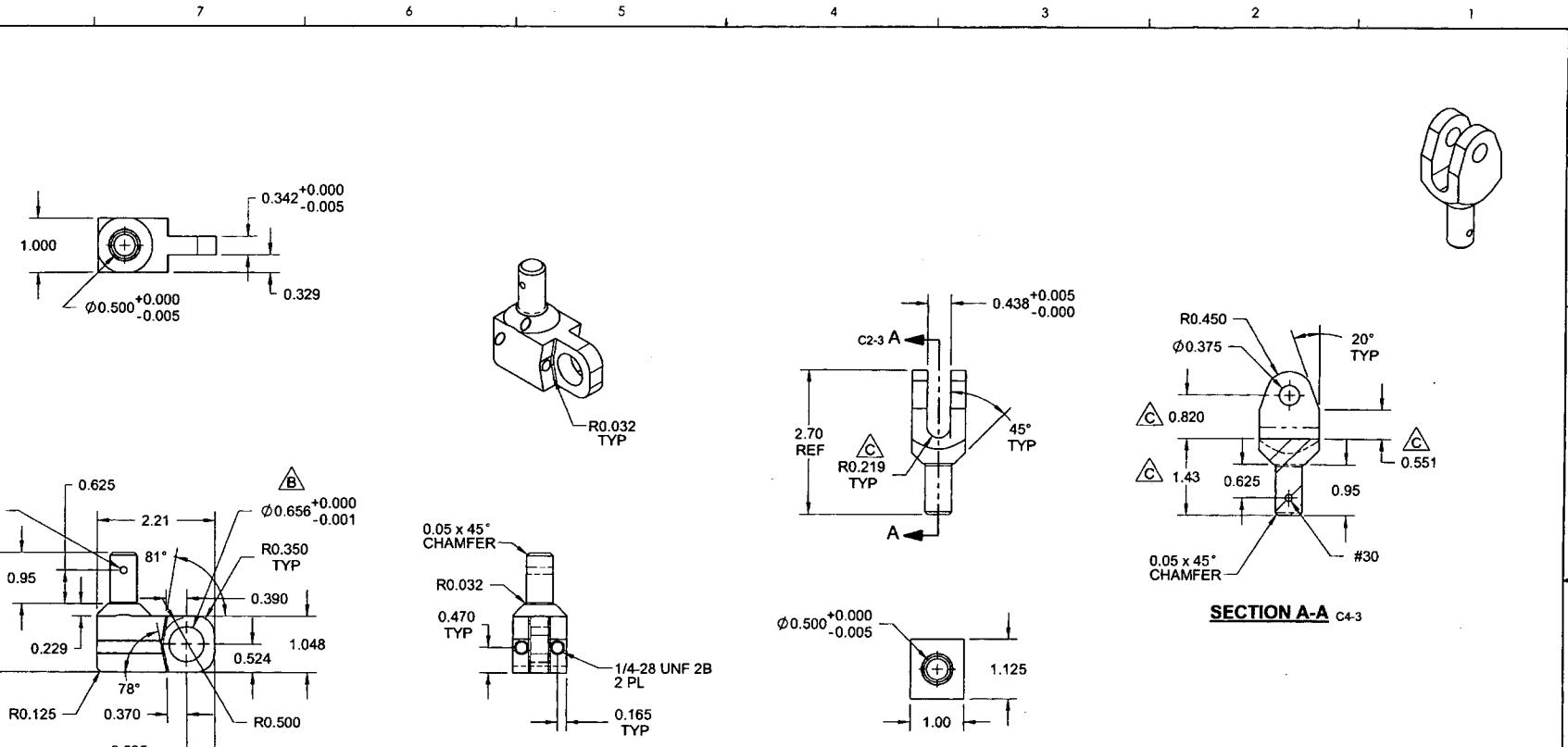
**RELEASED**  
*09/06/25 MDP*

C	DRAWING UPDATED TO CURRENT STANDARDS. REVISED NOTE #2 (REF PAR 0918) WAS 0.451 (ZN C1-2), 0.450 (ZN C1-3), 0.451 (ZN C1-4) WAS 1.53 (ZN C1-2), 0.551 WAS 0.451 (ZN C1-3), R0.219 WAS R0.050 (ZN C4-3). D3965-4 WAS SPAENAIR PIN (ZN C6-1, BS-2). D3966-4-750 WAS MCMASTER-CARR PIN (ZN BS-1). REF PAR 0918	RF	09.06.25
B	ADDED .9 PIN; REMOVED BALL PLUNGER; REVISE TOLERANCE; & Ø 0.125 WAS #30	RF	05.12.05
A	NEW ISSUE	RF	05.09.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	REV. C	
MFG. APPR.	<i>[Signature]</i>	DRAWING NO.	SHEET 1 OF 4
APPROVED	<i>[Signature]</i>	D3443	
DE APPR.	<i>[Signature]</i>	TITLE	SCALE
DATE	09.06.25	STRUT WELDMENT ASSEMBLY	NTS

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DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JP	DRAWING NO.	
MFG. APPR.		REV. C	
APPROVED	SJ	D3443	
DE APPR.	TH	SHEET 2 OF 4	
DATE	09.06.25	TITLE	
		SCALE	
		STRUT WELDMENT ASSEMBLY	
		NTS	
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D3443-1 LUG

**NOTES:**

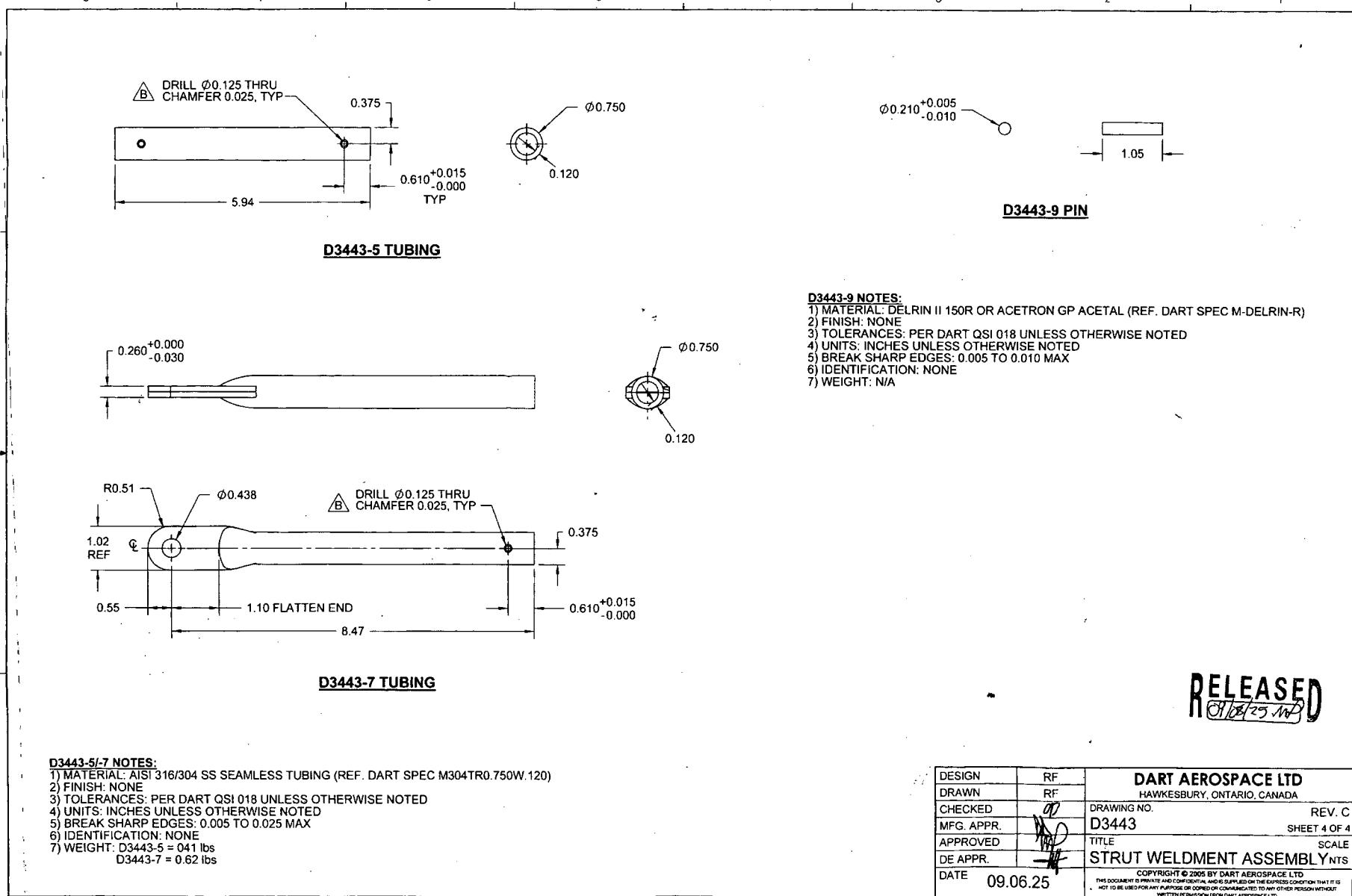
- 1) MATERIAL: D3443-1 = 17-4 SS PER AMS 5604/5643 (REF DART SPEC M17-4B)  
D3443-3 = AISI 304 SS ROUND BAR (REF. DART SPEC M304R)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3443-1 = 0.50 lbs  
D3443-3 = 0.35 lbs

D3443-3 CLEVIS

RELEASED  
09/08/25/MJ

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JP	DRAWING NO.	
MFG. APPR.		REV. C	
APPROVED		D3443	SHEET 3 OF 4
DE APPR.		TITLE	SCALE
DATE	09.06.25	STRUT WELDMENT ASSEMBLY NTS	

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**RELEASED**

07/25/04

DESIGN	RF	DART AEROSPACE LTD			
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA			
CHECKED	DD	DRAWING NO.			
MFG. APPR.	DD	REV. C			
APPROVED	DD	D3443			
DE APPR.	DD	SHEET 4 OF 4			
DATE	09.06.25	TITLE			
		SCALE			
		STRUT WELDMENT ASSEMBLY			
		NTS			
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